

# FACSIMILE COVER SHEET

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To: Examiner Francis J. Jaworski  
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From: Michael P. Straub, Esq.

Date: June 30, 2005

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Appl. No.: 10/672,747  
Applicant: Dror Nir  
Filed: September 26, 2003  
TC/A.U.: 3737  
Examiner: Francis J. Jaworski

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## UNITED STATES PATENT AND TRADEMARK OFFICE

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/672,747	09/26/2003	Dror Nir	U 014817-5	1019
26479	7590	06/28/2005	EXAMINER	
STRAUB & POKOTYLO 620 TINTON AVENUE BLDG. B, 2ND FLOOR TINTON FALLS, NJ 07724			JAWORSKI, FRANCIS J	
			ART UNIT	PAPER NUMBER
			3737	

DATE MAILED: 06/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/672,747

Applicant(s)

NIR, DROR

Examiner

Jaworski Francis J.

Art Unit

3737

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
 Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM  
 THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 26 September 2003.  
 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.  
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 8-10 and 18-21 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
 6) ☒ Claim(s) 8-10 and 18-21 is/are rejected.  
 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
 10) ☒ The drawing(s) filed on 26 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) ☐ All b) ☐ Some \* c) ☐ None of:  
 1. ☐ Certified copies of the priority documents have been received.  
 2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)  
 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-943)  
 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
 Paper No(s)/Mail Date 26 September 2003  
 4) ☐ Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_  
 5) ☐ Notice of Informal Patent Application (PTO-152)  
 6) ☐ Other: \_\_\_\_\_

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Art Unit: 3737

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## DETAILED ACTION

***Claim Rejections - 35 USC § 102/103***

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 8-10 and 18-21 are present for examination per September 26, 2003 pre-amdt.

Claims 8-9 and 18-20 are rejected under 35 U.S.C. 102(b,e) as being anticipated by Giger et al (US5657362) or in the alternative as obvious based upon Giger et al '362 in view of Giger et al (US2001/0043279) or Gilhuijs et al (US6317617).

The former teaches thresholding to determine benign versus malignant mammograms with classification being tissue texture or irregularity-based histogram calculations and analysis done by the processor engine of an expert system performing computer-assisted diagnosis. The radiogram is argued to be produced by a process which involves attenuation of x-radiation and therefore is related to scattered or reflected radiation.

However if the former be argued to not represent detection of reflected or scattered waves in the sense of through-transmission radiographs then it would have

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been obvious in view of the latter to use ultrasound per para [0070] of the published application or from Gilhuijs et al since ultrasound mammograms may be derived without exposing the patient to harmful ionizing radiation.

Claims 10 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Giger et al '362 alone or further in view of Giger et al as applied to claims 9, 20 above, and further in view of Gilhuijs et al since the latter teaches the suitability of Fourier analysis by the neural network for evaluating texture abnormalities of tissue, see col. 12 lines 38-51 as exemplary.

Nishikawa et al (US6058322 and 5598481) and Asada et al (US5463548) are representative of neural network-based and wavelet-based analyses for discriminating malignant tissue based upon texture.


Miller (US6393157) discusses wavelet versus Fourier/entropy analyses for this purpose.

Smith et al (US5644232) is representative of an MRI-based system which uses thresholding and tissue texture/irregularity analysis by a neural network including entropy analysis to categorize tissue to determine if malignant.

Any inquiry concerning this communication should be directed to Jaworski Francis J. at telephone number 571-272-4738

FJJ:fjj

06252005



Francis J. Jaworski  
Primary Examiner

FORM PTO-1449 U. S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICE

INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT

(Use several sheets if necessary)

ATTY. DOCKET NO.	SERIAL NO.
U 014817-5	
APPLICANT	
Dr r NIR	
FILING DATE	GROUP

## REFERENCE DESIGNATION

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB- CLASS	FILING DATE IF APPROPRIATE
<i>MA</i>	AA	4,453,550	06/1984	Flax	600	437	
	AB	4,655,228	04/1987	Shimura et al.	73	602	
	AC	4,858,124	08/1989	Lizzi et al.	73	602	
	AD	4,851,984	07/1989	Doi et al.	382	6	
	AE	5,319,549	06/1994	Katsuragawa et al.	382	6	
	AF	6,282,305	08/2001	Huo et al.	382	128	
	AG	5,982,917	11/1999	Clarke et al.	382	132	
	AH	4,803,994	02/1989	Burke	600	442	
	AI	5,651,363	07/1997	Kaufman et al.	600	438	
	AJ	4,817,015	03/1989	Insana et al.	600	437	
	AK	6,317,617	11/2001	Gilhuijs et al.	600	443	
	AL	5,524,636	06/1996	Sarvazyan et al.	128	774	
	AM	5,839,441	11/1998	Steinberg	128	660.04	
	AN	6,234,968	05/2001	Sumanaweera	600	443	
	AO	6,312,382	11/2001	Mucci et al.	600	437	
	AP	5,081,993	01/1992	Kitney et al.	128	661.08	
	AQ	5,107,841	04/1992	Sturgill	128	661.09	
<i>U</i>	AR	2002/0040187	04/2002	Alam et al.	600	442	

## FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB- CLASS	TRANSLATION	
						YES	NO
	AS						
	AT						
	AU						
	AV						
	AW						
	AX						

EXAMINER

DATE CONSIDERED 6-25-05

EXAMINER:

Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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Form PTO-1449 6-4

<b>Notice of References Cited</b>	Application/Control No. 10/672,747	Applicant(s)/Patent Under Reexamination NIR, DROR	
	Examiner Jaworski Francis J.	Art Unit 3737	Page 1 of 1

## U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
	A	US-5,657,362	08-1997	Giger et al.	378/37
	B	US-2001/0043729	11-2001	Giger et al.	382/128
	C	US-6,058,322	05-2000	Nishikawa et al.	600/408
	D	US-5,598,481	01-1997	Nishikawa et al.	382/130
	E	US-5,463,548	10-1995	Asada et al.	600/300
	F	US-6,393,157	05-2002	Miller, Lance	382/254
	G	US-5,644,232	07-1997	Smith, Justin P.	324/304
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

## FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

## NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

\*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)  
 Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.